WHAT IS CLAIMED IS:

1. A method of producing a (run, level) encoded picture from an original picture, said method comprising:

producing respective sets of transform coefficients for blocks of pixels in the original picture;

quantizing transform coefficients in the respective sets of transform coefficients to produce respective sets of quantization indices for the blocks of pixels, wherein quantization indices for at least some of the blocks are produced by using a quantization step size that is not uniform within said at least some of the blocks;

selecting largest magnitude quantization indices from the respective sets of quantization indices to produce respective sets of quantization indices having non-zero levels for the blocks of pixels; and

(run, level) encoding quantization indices from the respective sets of quantization indices to produce the (run, level) encoded picture.

2. The method as claimed in claim 1, wherein the respective sets of transform coefficients for the blocks of pixels are produced by computing discrete cosine transforms.

3. The method as claimed in claim 1, wherein the largest magnitude quantization indices are selected from the respective sets of quantization indices by finding up to a selected number of largest magnitude non-zero quantization indices from each of the respective sets of quantization indices.

4. The method as claimed in claim 1, wherein the largest magnitude quantization indices are selected from the respective sets of quantization indices by sorting up to a selected number of non-zero quantization indices from each of the respective sets of quantization indices.

5. The method as claimed in claim 1, wherein the original picture is a frame of motion picture video, the respective sets of transform coefficients for the blocks of pixels are produced and quantized by an MPEG encoder to produce (run, level) coded MPEG video, and the largest magnitude quantization indices are selected from the respective sets of quantization indices during transcoding of the (run, level) coded MPEG video to produce reduced-bandwidth, reduced-quality MPEG encoded video.

6. The method as claimed in claim 1, wherein the (run, level) encoding of the quantization indices from the respective sets of quantization indices to produce the (run, level) encoded picture includes (run, level) encoding of quantization indices that are not the largest magnitude quantization indices in order to (run, level) encode the largest magnitude quantization indices with fewer bits than would otherwise be required for (run, level) encoding of the largest magnitude quantization indices.

7. A method of scaling non-scalable MPEG-2 coded video to produce reduced-bandwidth, reduced-quality MPEG-2 coded video, the non-scalable MPEG-2 coded video including a set of non-zero AC discrete cosine transform (DCT) coefficients for 8x8

blocks of the non-scalable MPEG-2 coded video, said method comprising removing non-zero AC DCT coefficients from the non-scalable MPEG-2 coded video so that the reduced-quality MPEG-2 coded video includes no more than a selected number of largest magnitude quantization indices for the non-zero AC DCT coefficients for each 8x8 block.

8. The method as claimed in claim 7, which includes, for each of the 8 x 8 blocks of the non-scalable MPEG-2 video:

a.) parsing and copying a differential DC coefficient variable-length code (VLC);

b.) parsing and decoding (run, level) event variable-length codes (VLCs) up to an end-of-block marker to identify a respective set of non-zero quantization indices;

c.) finding up to the selected number of non-zero quantization indices having the largest level magnitudes in the respective set of non-zero quantization indices to identify a respective set of largest magnitude non-zero quantization indices; and

d.) applying (run, level) event formation and entropy encoding to the set of largest magnitude non-zero quantization indices.

9. The method as claimed in claim 8, which includes sorting indices in the respective set of non-zero quantization indices in order to find up to the selected number of non-zero quantization indices having the largest level magnitudes in the respective set of non-zero quantization indices.

10. The method as claimed in claim 8, wherein the application of (run, level) event formation and entropy encoding to the set of largest magnitude non-zero quantization

indices includes (run, level) encoding of quantization indices that are not largest magnitude quantization indices in order to (run, level) encode the set of largest magnitude quantization indices with few bits than would otherwise be required for (run, level) encoding of the set of largest magnitude quantization indices.

11. A digital computer programmed for producing a (run, level) encoded picture from an original picture, wherein the digital computer comprises at least one processor programmed for:

producing respective sets of transform coefficients for blocks of pixels in the original picture;

quantizing transform coefficients in the respective sets of transform coefficients to produce respective sets of quantization indices for the blocks of pixels, wherein quantization indices for at least some of the blocks are produced by using a quantization step size that is not uniform within said at least some of the blocks;

selecting largest magnitude quantization indices from the respective sets of quantization indices to produce respective sets of quantization indices having non-zero levels for the blocks of pixels; and

(run, level) encoding quantization indices from the respective sets of quantization indices to produce the (run, level) encoded picture.

12. The digital computer as claimed in claim 11, wherein the processor is programmed for producing the respective sets of transform coefficients for the blocks of pixels by computing discrete cosine transforms.

13. The digital computer as claimed in claim 11, wherein the processor is programmed for selecting the largest magnitude quantization indices from the respective sets of quantization indices by finding up to a selected number of largest magnitude non-zero quantization indices from each of the respective sets of quantization indices.

14. The digital computer as claimed in claim 11, wherein the processor is programmed for selecting the largest magnitude quantization indices from the respective sets of quantization indices by sorting up to a selected number of non-zero quantization indices from each of the respective sets of quantization indices.

15. The digital computer as claimed in claim 11, wherein the original picture is a frame of motion picture video, the processor is programmed for producing and quantizing the respective sets of transform coefficients for the blocks of pixels during MPEG encoding of the original picture to produce (run, level) coded MPEG video, and the processor is programmed for selecting the largest magnitude quantization indices from the respective sets of quantization indices during transcoding of the (run, level) coded MPEG video to produce reduced-bandwidth, reduced-quality MPEG encoded video.

16. The digital computer as claimed in claim 11, wherein the processor is programmed for (run, level) encoding of the quantization indices from the respective sets of quantization indices to produce the (run, level) encoded picture by including (run, level) encoding of quantization indices that are not the largest magnitude quantization

indices in order to (run, level) encode the largest magnitude quantization indices with fewer bits than would otherwise be required for (run, level) encoding of the largest magnitude quantization indices.

17. A digital computer for scaling non-scalable MPEG-2 coded video to produce reduced-bandwidth, reduced-quality MPEG-2 coded video, the non-scalable MPEG-2 coded video including a set of non-zero AC discrete cosine transform (DCT) coefficients for 8x8 blocks of the non-scalable MPEG-2 coded video, the digital computer comprising a processor programmed for removing non-zero AC DCT coefficients from the non-scalable MPEG-2 coded video so that the reduced-quality MPEG-2 coded video includes no more than a selected number of largest magnitude quantization indices for the non-zero AC DCT coefficients for each 8x8 block.

18. The digital computer as claimed in claim 17, wherein the processor is programmed for processing each of the 8 x 8 blocks of the non-scalable MPEG-2 video by:

a.) parsing and copying a differential DC coefficient variable-length code (VLC);

b.) parsing and decoding (run, level) event variable-length codes (VLCs) up to an end-of-block marker to identify a respective set of non-zero quantization indices;

c.) finding up to the selected number of non-zero quantization indices having the largest level magnitudes in the respective set of non-zero quantization indices to identify a respective set of largest magnitude non-zero quantization indices; and

d.) applying (run, level) event formation and entropy encoding to the set of largest magnitude non-zero quantization indices.

19. The digital computer as claimed in claim 18, wherein the processor is programmed for sorting indices in the respective set of non-zero quantization indices in order to find up to the selected number of non-zero quantization indices having the largest level magnitudes in the respective set of non-zero quantization indices.

20. The digital computer as claimed in claim 18, wherein the processor is programmed for applying (run, level) event formation and entropy encoding to the set of largest magnitude non-zero quantization indices by including (run, level) encoding of quantization indices that are not largest magnitude quantization indices in order to (run, level) encode the set of largest magnitude quantization indices with fewer bits than would otherwise be required for (run, level) encoding of the set of largest magnitude quantization indices.